

1ST AND 2ND CATEGORIES										3RD AND 4TH CATEGORIES									
PROCESSES AND PROPERTIES INDEX																			
RODNIKOVA, V.V.																			
CA																			
<p>Heat transfer by radiation in heated glass. V. V. Rodnikova. <i>Nizhlo i Keram.</i> 6, No. 3, 10-14(1949). Colored and colorless glasses, in 1.1-ton and 1-ton lots, were cooled by conduction and radiation. The colored glasses had a small transparency for infrared rays, whereas the colorless glasses had a high transparency for rays up to 3 μ. During the initial period of cooling, the temp. gradient between the center and the periphery was large for the colored glasses and small for the colorless glasses. Toward the end, the rate of cooling was practically the same and the gradients were about equal. The heat flow q and the coeff. of thermal cond. λ are related by $q = (2\lambda/R)(t_c - t_s) = (\pi r^2/F)(\partial t/\partial z)$ cal. per sq. m., where R is the radius of the sphere in m., λ is expressed in cal./m. hr. degree, t_c is the temp. in the center, t_s is the temp. on the surface, r is the sp. gr., c is the heat capacity in cal./kg. degree, v is the vol. in cu. m., F is the surface in sq. m., and z is time in hrs. The apparent λ deduced from the true thermal cond. and the heat transmission due to radiation. The apparent λ was plotted as a function of temp.; for dark-green glass the apparent λ was corrected to true λ by utilizing the true λ of window</p>										<p>glass and its variation with temp. No corrections were made for heavy flint, borosilicate, and dark-violet glasses because of their differences in compn. and thermal characteristics from window glass. The curves indicate that in colorless glasses, heat transfer above 300° takes place through thermal conduction and radiation; the role of radiation increases rapidly with rising temp. and reaches 10-15 cal./m. hr. degree at 780°. In colored glasses, heat transfer below 800° takes place exclusively through thermal conduction, and the same is true for colorless glasses below 300°; this explains the equal temp. gradients and rates of cooling of these glasses below 300°.</p> <p>B. Z. Kamich</p>									
METALLURGICAL LITERATURE CLASSIFICATION																			
SECTION 1										SECTION 2									
SECTION 3										SECTION 4									

7-(5)-52

C

Thermal conductivity of glassmel. V. V. ROUNIKOVA.
Shtelo i Keram., 8 [1] 9 12 (1951) - R gives a critical review
In hot glass, the propagation, absorption, and emission of radiant
heat energy occur just as in a semitransparent medium. An
absolutely transparent body cannot emit thermal radiation: the
most transparent optical glass of sufficient thickness with a green
tinge indicates a capacity to absorb heat radiation selectively.
There is an analogy between radiation and absorption by hot
glass and hot gases (CO_2 , H_2O , etc.) which have absorption bands
in the infrared. The apparent coefficients of heat conductivity
of hot glasses of great thickness are correct indications of the dif-
ferences in heat intensity of heat transfer in transparent and low
transparent glasses. 7 references. H.Z.K.

21-58-7-19/27

AUTHORS: Lysin, B.S., Member of the AS UkrSSR, and Rodnikova, V.V.

TITLE: Investigations of the Crystallization of Stone Castings
(Issledovaniya kristallizatsii kamennogo lit'ya)

PERIODICAL: Dopovidi Akademii nauk Ukrain's'koi RSR, 1959, Nr 7, pp 760-763 (USSR)

ABSTRACTS: Items made of stone castings have a high strength (crushing resistance from 3,000 to 5,000 kg per sq cm), a high chemical resistance, and important dielectric properties. The Ukrainian SSR is rich in natural rocks suitable for the manufacture of stone castings. In spite of these favorable circumstances, this promising branch of industry is not well developed. The reasons are: insufficient knowledge of physico-chemical processes occurring during crystallization and a low stage in casting technology. Therefore, the authors investigated some processes taking place during the crystallization of stone castings, in particular of some clays, slags and silicon masses. Experiments showed that during slag crystallization, the volume decreases by 6 to 11.8 %. Optimum crystallization temperatures were determined for melts of various compositions. The temperatures

Card 1/2

Investigations of the Crystallization of Stone Castings 21-58-7-18/27

were measured in the center and at the surface of slag and glass castings, and it was concluded that slag castings must be cooled down very slowly in order to avoid cracking. There is 1 table and 1 graph.

ASSOCIATION: Kiyevskiy politekhnicheskii institut (Kiyev Polytechnic Institute)

SUBMITTED: January 30, 1958

NOTE: Russian title and Russian names of individuals and institutions appearing in this article have been used in the transliteration.

1. Rock--Applications
2. Rock--Properties
3. Slags--Casting
4. Clays--Casting
5. Glass--Casting
6. Castings--Crystallization

Card 2/2

72-58-6-7/19

AUTHOR: Rodnikova, V.V.

TITLE: The Determination of the Reduced Coefficients of the Thermal Conductivity of Some Types of Glass (Opredeleniye **privedennykh** koefitsiyentov teploprovodnosti nekotorykh **stekol**)

PERIODICAL: Steklo i Keramika, 1958, Vol. 15, Nr 6, pp. 20-21 (USSR)

ABSTRACT: The temperature drop in the glass mass and/or in the glass products after cooling down could hitherto not be calculated because the coefficient of thermal conductivity necessary for this purpose was measured only at low temperatures. Heat exchange in a layer of transparent glass is brought about both by thermal conductivity and by the heat radiated by the glass itself, which the authoress already pointed out in her previous work (Ref 1). The value of the reduced coefficient of the thermal conductivity of glass, which includes thermal conductivity and thermal radiation, is modified with an increase of temperature within wide limits and at 1400° attains values which exceed the thermal conductivity of steel. The authoress recommends a method of computation based upon the formulae developed by N.A.Zakharikov (Ref 2). The thermal capacity of glass in a heated state was computed by the formulae developed by O.K.Botvinkin (Ref 3). The experiment is described. Three values

Card 1/2

The Determination of the Reduced Coefficients of the Thermal Conductivity of Some Types of Glass

72-58-6-7/19

of the reduced coefficient of the thermal conductivity of 3 types of industrial glass as well as for building bricks are given in figs.1 and 2. The ferrous oxide content of the types of glass investigated may be seen from a table. In practice it is of importance that the reduced coefficient of thermal conductivity for window glass at annealing temperature is about double that of normal temperature, a fact, which has hitherto not been taken into account. This method can be applied for the purpose of determining the coefficient of the thermal conductivity of various types of industrial glass within the temperature interval of 100 - 900°, which comprises the most important production processes of forming and annealing, as well as for the purpose of determining the thermal conductivity of refractories. There are 2 figures, 1 table, and 5 references, 4 of which are Soviet.

ASSOCIATION: Kiyevskiy politekhnicheskii institut (Kiyev Polytechnic Institute)

1. Glass--Heat transfer
2. Glass--Thermodynamic properties

Card 2/2

RODNIN, A.N.

Reconditioning machine parts. Mashinostroitel' no.6:17-18 Je
'62. (MIRA 16:5)

(Machine tools--Maintenance and repair)

RODNIN, A.N.

Reconditioning machine parts. Stan.i instr. 33 no.3:38-40 Mr '62.
(MIRA 15:2)

(Machinery—Maintenance and repair)

RODNIN, A.N., inzh.

Modernizing equipment for continuous mass production. Vest.
mash. 42 no.3:48-50 Mr '62. (MIRA 15:3)
(Machine tools--Technological innovations)

RODNIN, A.N., inzh.

Modernizing equipment for establishing an automatic production
line. Vest.mash. 41 no.11:83-84 N '61. (MIRA 14:11)
(Podol'sk—Machinery industry--Technological innovations)
(Automation)

S/122/60/000/004/013/014
A161/A130

AUTHOR: Rodnin, A.N., Engineer
TITLE: Some practical experience with equipment repair and modernization
PERIODICAL: Vestnik mashinostroyeniya, no. 4, 1960, 69 - 74

TEXT: The author points out that repair and modernization of obsolete machines usually costs too much, and illustrates this by examples of these costs at the Podol'skiy mekhanicheskiy zavod im. Kalinina (Podol'sk Machine Plant im. Kalinin). For instance, the capital overhaul of the 1A62 (1D62) screw-cutting lathe frequently amounts to 75% to the cost of a new, i.e., 10,000 rubles or more, and the modernization according to ENIMS standard modernization plan (raising the spindle velocity to 1,200 rpm) increased the cost of the 1D62 to 20,000 from the initial 9,800 rubles; quite many turret lathes have been modernized by replacing the spindle stock, changing the planetary gear ratio, adding a motor, a new electric system, etc., and actually building a new machine. The result is a 25% higher productivity and costs of 6,000 rubles, and the economic advantage is absolutely insufficient to compensate the expenditures in several years. The Podol'skiy Plant is a mass-production plant, and a considerable part of its machine

Card 1/ 4

S/122/60/000/004/013/014
A161/A130

Some practical experience ...

tools are of a special-purpose type with multiposition attachments; 46.5% of the machines are more than 20 years old. A special new repair techniques department at the mechanical repair shop is expected to reduce costs. The author lists modern repair and resurfacing methods stressing the advantages of hard-alloy surfacing; electro-metallization; bi-metal bearings; resurfacing worn bronze bushings by metallization with bi-metal wire (aluminum and lead); the use of ДСП (DSP) laminar wood plastics as substitute for metal in bearing bushings, gears, various guides, bronze rings in crank presses. Gears from DSP in tumbling drums have a longer life than former bronze gears (1 year comparing to 3 months). Partial modernization, i.e., new machine components instead of complete change of machines is recommended by the author as economically justified, and several examples of such modernization are given: a vertical milling machine turned into a 10-spindle drilling automate for simultaneous drilling from two sides; two operations combined into one in a ПРК-1А-9 (PRK-1A-9) semi-automatic reaming machine; new automatic feeder for 800-ton caulking press. This feeder has increased the operation efficiency of the press 5 times. It moves thin sheet blanks of complex and uneven shape one by one into the die in 355 mm distance. The working principle consists in singling out every following blank by a swinging gate that moves the blank in turns to the loading magazine and to the opening above the guide bars and

Card 2/4

Some practical experience ...

S/122/60/000/004/013/014
A161/A130

feeding pusher. Blanks (1) (Fig. 5) are loaded into the guide walls of the magazine (2), and one blank at the bottom of the pile touches by its edges the cut-off gate (3) swinging on the same axis with the blank. The cut in the gate having the shape and size of the blank coincides in turns with the guide walls of the magazine and with the opening in a stationary ring (4) above the guides. Automation included into the modernization plan for 1959 - 1965 is expected to reduce work consumption and to raise the machines output by 20-30%. Some modernized machines will be joined into automatic lines. There are 5 figures and 2 tables.

ASSOCIATION: Podol'skiy mekhanicheskiy zavod im. Kalinina (Podol'sk Machine Plant imeni Kalinin)

Card 3/4

RODNIN, A.N.

Modernizing industrial equipment under mass production conditions.
Mashinostroitel' no.3:14 15 Mr '61. (MIRA 14:3)
(Industrial equipment--Technological innovations)

RODNIN, A.N.

Reconditioning parts by metal spraying. Mashinostroitel' no.12:
23-24 D '60. (MIRA 13:12)

(Metal spraying)

RODNIN, A. N.

Modernizing equipment in order to improve working conditions.
'Mashinostroitel' no.10:31-32 '60. (MIRA 13:10)
(Technological innovations)

RODNIN, A.N., inzh.

Experience in repairing and modernizing equipment. Vest.mash.
40 no.4:69-74 Ap '60. (MIRA 13:6)

1. Podol'skiy mekhanicheskiy zavod im.Kalinina.
(Podol'sk—Industrial equipment)

RODNIN, A.N.

Decreasing the cost of equipment repairs. Stan.i instr. 29 no.12:
33-34 D '58. (MIRA 11:12)

(Machinery--Maintenance and repair)

RODNOV, M.M. (st. Vikhorevka)

Thermochemical softening of water inside locomotive boilers.
Zhel.dor.transp. 37 no.6:78-79 Je '56. (MLRA 9:8)
(Locomotive boilers) (Feed-water purification)

RUBINSHTEYN, G.; BOL'SHAKOV, L.; RODNOV, V.; GUBANOV, M.

A reprint is needed. Vnesh.torg. 30 no.9:36 '60. (MIRA 13:9)
(Commerce--Dictionaries)

RODNOV, V.

Air, ventilation and health. Okhr. truda i sots. strakh. 6 no.9:
34-35 S '63. (MIRA 16:10)

NESTEROV, M.; KHONKAYURI, P.; RODNOV, V.; VAL'FORS, V.; NICHKOV, V.;
VALDEN, Yu.

Favorable prospects of Soviet-Finnish trade. Vnesh.torg. 30
no.6:29-31 '60. (MIRA 13:6)

1. Predsedatel' Prezidiuma Vsesoyuznoy trgovoy palaty (for Nesterov). 2. Predsedatel' finsko-sovetskoy trgovoy palaty, general'nyy direktor Aktsionernogo obshchestva "Rauma-Repola" for Khonkayuri). 3. Predsedatel' Vsesoyuznogo Ob'yedineniya "Mashinostroy" (for Rodnov). 4. General'nyy direktor Aktsionernogo obshchestva "Vyartsila-kontsern," chlen pravleniya finskosovetskoy palaty (for Val'fors). 5. Predsedatel' Vsesoyuznogo Ob'yedineniya "Ekspozitsiya" (for Nichkov). 6. Direktor-rasporiaditel' Aktsionernogo obshchestva "Ob'yedinennyye bumazhnyye fabriki," chlen pravleniya finsko-sovetskoy trgovoy palaty (for Valden).

(Russia--Commerce--Finland) (Finland--Commerce--Russia)

RODNOV, V.I.; MARTYNOV, B.P.; VASIL'YEV, N.V.; NIKOLAYENKO, B.Z.; GUROV, Ye.P.;
VOLOCHKOV, Ye.P.; NICHKOV, V.H.; MARKELOV, I.A.; GUBANOV, M.V.

What does your association offer for the 43d anniversary of the Great
October? Chiefs of all-union associations speak. Vnesh. torg. 30
no.10:28-33 '60. (MIRA 13:10)

1. Predsedatel' Vsesoyuznogo ob'yedineniya "Mashinoeksport" (for Rodnov).
 2. Predsedatel' Vsesoyuznogo ob'yedineniya "Mashonciimport" (for Martynov).
 3. Predsedatel' Vsesoyuznoye ob'yedineniye "Mashpriborintorg" (for Vasil'yev).
 4. Predsedatel' Vsesoyuznogo ob'yedineniya "Tekhnopromimport" (for Gubanov).
 5. Ispolnyayushchiy obyasnosti predsedatelya Vsesoyuznogo ob'yedineniya "Soyuzpromeksport" (for Nikolayenko).
 6. Predsedatel' Vsesoyuznogo ob'yedineniya "Soyuznefteeksport" (for Gurov).
 7. Predsedatel' Vsesoyuznogo ob'yedineniya "Promsyr'yeimport" (for Volchkov).
 8. Predsedatel' Vsesoyuznogo ob'yedineniya "Eksportles" (for Nichkov).
 9. Predsedatel' Vsesoyuznogo ob'yedineniya "Raznoeksport" (for Markelov).
- (Russia--Commerce)

ZAKHAROV, M.S.; STROMBERG, A.G.; RODNOVA, G.G.

Polarographic determination of manganese in glasses. Zav.lab.
26 no.2:153-154 '60. (MIRA 13:5)

1. Tomskiy politekhnicheskii institut i Tomskiy elektrolampovyy
zavod.

(Manganese--Analysis)
(Glass--Analysis)

5 (2)

AUTHORS:

Zakharov, M. S., Stromberg, A. G.,
Rodnova, G. G.

S/032/60/026/02/011/057
B010/B009

TITLE:

Polarographical Determination of Manganese in Glasses

PERIODICAL:

Zavodskaya laboratoriya, 1960, Vol 26, Nr 2, pp 153 - 154 (USSR)

ABSTRACT:

A new method for the determination of manganese in special glass types containing considerable amounts of manganese was developed. Experiments showed that Mn^{2+} may be best determined polarographically in an ammonia - ammonium chloride solution. M. A. Shcherbachev (Ref 1) recommends that the latter solution be first added to the solution under investigation and the sodium sulfite added subsequently. The present authors, however, noted that in this case a partial precipitation of $MnO(OH)_2$ takes place. It was found that the sodium sulfite amount added affects the polarographic wave of Mn^{2+} (Figure), since Mn^{2+} forms a stabler complex with sodium sulfite than it does with ammonia. The working method given provides for the glass to be dissolved with NH_4F . In order to prevent precipitation of manganic acid

Card 1/2

Polarographical Determination of Manganese in
Glasses

S/032/60/026/02/011/057
B010/B009

at the addition of ammonia, 1m Na_2SO_3 solution is added to the hydrochloric acid solution of the oxides. Subsequently, the mixture of 0.1 m NH_4OH , 0.25m NH_4Cl , 0.25 m Na_2SO_3 , and 0.025% of gelatine is added. The determination results obtained polarographically are in agreement with those obtained gravimetrically (Table). There are 1 figure, 1 table, and 1 Soviet reference.

ASSOCIATION: Tomskiy politekhnicheskiy institut (Tomsk Polytechnic Institute).
Tomskiy elektrolampovyy zavod (Tomsk Electric Bulb Plant)

Card 2/2

RODNYANSKAYA, E.I.; PROLOV, Yu.S.

Contribution of young geographers to science. Vest. LGU 18 no.12:
143-144 '63. (MIRA 16:8)

(Geography)

RODNYANSKAYA, E.Ye.

Method of the large-scale mapping of landforms of the floodplain
lands of large rivers. Mat. Kom. po land. kart. no.1:37-44 '61.
(MIRA 16:10)

RODNYANSKAYA, E.Ye.

Nature of component relationship in alluvial plains. Uch. zap. LGU
no.317:144-157 '62. (MIRA 16:6)

(Ob' River--Alluvial plain)

RODNYANSKAYA, E. Ye.

Sixth All-Union Conference on the Study of Landforms. Vest LGU
19 no. 6:161-162 '64. (MIRA 17:5)

RODNYANSKAYA, E.Ya.

Brief characterization of the vegetation of the Ob' flood plain
in Berezovskiy District. Nauch.dokl.vys.shkoly;geol.-nauki no.4:
90-98 '58. (MIRA 12:6)

1. Moskovskiy universitet, geograficheskiy universitet, Ob'skaya
ekspeditsiya.

(Ob' Valley--Vegetation and climate)

CHOCHIA, N.S.; RODNYANSKAYA, E.Ye.

Characteristics of the morphological structure of landforms of
the Or'-Kuma watershed (Southern Urals). Vest. LGU 19 no.18:
63-69 '64. (MIRA 17:11)

RODNYANSKIY, A. M.

Kudryavtzev, L. D., and Rodnyanski, A. M. On the power of the system of components of sets of the type F_σ . C. R. (Doklady) Acad. Sci. URSS (N.S.) 52, 3-5 (1946).

The authors state the following theorem. Let R be any set which is an F_σ . Then the system of components of R is finite, denumerable or of the power of the continuum. Their proof assumes that the set R is a subset of a space X which is a countable union of bicomact spaces and that X satisfies the second axiom of countability. Under these restrictions, the theorem is true. E. Hewitt (Bryn Mawr, Pa.).

Source: Mathematical Reviews,

Vol. 8, No. 3

Moscow State U.

Smul x20

RODNYANSKIY, A.M.

Rodnyanski, A. M., and Kaschenko, Yu. D. On irreducible continua. *Mat. Sbornik* N.S. 26(68), 321-340 (1950). (Russian)

In this paper, a number of questions in the theory of irreducible continua are thoroughly explored. A topological space R is said by the authors to be locally connected at $x \in R$ if for every neighborhood $U(x)$, there exists a neighborhood $V(x)$ such that for all $y \in V(x)$, there exists a connected subset T of $U(x)$ containing both x and y . [Reviewer's note. This definition is at variance with commonly used terminology. See, e.g., Hausdorff, *Mengenlehre*, 3d ed., de Gruyter, Berlin-Leipzig, 1935, pp. 155-156. For the purposes of the present review, we shall designate the property described above as weak local connectedness at x .] The authors first investigate the relation between local connectedness and weak local connectedness; stating without proof that if $x \in R$ admits a neighborhood at all the points of which there is weak local connectedness, then R is locally connected at x ; showing by an example in the plane that a compact connected space may have a point of weak local connectedness which is not a point of local connectedness; and proving that if C is a compact Hausdorff space, irreducible between points a and b , then every point of weak local connectedness is also a point of local connectedness. Next, it is shown that a separable metric space, which is irreducibly connected between two points and is either weakly locally connected, or has at every point arbitrarily small neighborhoods with compact boundaries, is necessarily a topological image of the closed interval $[0, 1]$. The main results of the paper center on the following objects. Let C be a compact connected metric space irreducible between two points a and b . Let L be the set of points in C at which weak local connectedness obtains. Let $M = C \cap L$; let \mathcal{L} be the system of components of L , and \mathfrak{M} the system of components of M . A large, one is tempted to say exhaustive, array of facts concerning L , M , \mathcal{L} , and \mathfrak{M} is assembled. We mention the following. Every set in \mathcal{L} is either a point or the topological image of an interval (open, closed, or half-open). If $A \in \mathcal{L}$, then $A \cap A^{\circ}$ contains at most two points. If $B \in \mathfrak{M}$, then B contains at least two points, is locally compact, and has the property that every pair of points of B is contained in a compact connected subset of B . There are only a countable number of sets in \mathcal{L} which contain more than one point; there may be \aleph_1 ($\aleph_1 < \aleph_0$), \aleph_0 , or 2^{\aleph_0} sets in \mathcal{L} containing exactly one point; and these are the only possible cardinal numbers. The cardinal number of \mathfrak{M} is either finite, or \aleph_0 , or 2^{\aleph_0} .

E. Hewitt (Seattle, Wash.).

Source: Mathematical Reviews.

Vol 12 No. 5

RODNYANSKIY, A.M.

Rodnyanski, A. M. On differentiable mappings of regions.
Doklady Akad. Nauk SSSR (N.S.) 72, 15-17 (1950).
(Russian)

Let G be a region in R^n , $n \geq 2$. Let f_1, f_2, \dots, f_n be real-valued functions with domain G and possessing total differentials throughout G . Let f be the mapping of G into R^n defined by f_1, \dots, f_n , and let J denote the Jacobian of f . Let G^+ , G^- , and G^0 denote the subsets of G where J is > 0 , < 0 , and $= 0$, respectively. For $E \subset R^n$, let E_+ denote the set $E^+ \cap E^-$, and let $\text{mes } E$ denote the measure of the set E . The following assertions are made. (1) If $G^+ \neq \emptyset$ and $G^- \neq \emptyset$, then $G^0 \neq \emptyset$. (2) If $G^0 = \emptyset$, then for every $a \in G$, there exist connected neighborhoods $U(a)$ and $V(f(a))$ such that f maps $U(a)$ homeomorphically onto $V(f(a))$. (3) If $a \in G$ and $J(a) \neq 0$, then there exists an arbitrarily small connected neighborhood $U(a)$ such that $f(U(a))$ is a region. (4) $G = G^0$ if and only if f_1, \dots, f_n are functionally dependent in G . (5) $\text{mes } fG^0 = 0$. If $G^+ \neq \emptyset$, then $\text{mes } G^+ > 0$ and $\text{mes } fG^+ > 0$. If $\text{mes } fG > 0$, then $(fG)^- \neq \emptyset$. (6) Suppose that G is bounded and that f admits a continuous extension over \bar{G} . Then if $(fG)_0 \subset f(G_0)$, the functions f_1, \dots, f_n have maximum and minimum values on \bar{G} which are assumed on G_0 . A number of other results are announced; no proofs are given.

E. Hewitt (Seattle, Wash.).

Source: Mathematics

Vol

No. 10

RODNYANSKIY, A. M.

Mathematical Reviews
Vol. 15 No. 4
Apr. 1954
Topology

9-13-54
LL

RODNYANSKIY, A. M. Integral representations of the degree of a mapping. Doklady Akad. Nauk SSSR (N.S.) 91, 1019-1021 (1953). (Russian)

Denote by G a bounded region in Euclidean n -space R^n , and denote by G_0 the boundary of G . If $f: G \rightarrow R^n$ is continuous and each $f^{-1}(y)$ is compact, then Sitnikov [Mat. Sbornik N.S. 31(93), 439-458 (1952); these Rev. 14, 489] has defined the degree $\gamma(f, y)$ of f at the point y . In this paper, it is assumed that $f: \bar{G} \rightarrow R^n$ is continuous; for each $y \in R^n - fG_0$, the degree $\gamma(f, y)$ is defined. Most of the theorems are listed below; no proofs are given. Theorem 1: $\gamma(f, y)$ is constant on each component of $R^n - fG_0$ (if O is such a component, $\gamma(f, O)$ will indicate this constant). Theorem 2: if f is differentiable on G and $J(x)$ is the Jacobian of f , then $\gamma(f, y)$ is characterized by the following: 1) $\gamma(f, y)$ is defined on $R^n - fG_0$ and constant on each component of $R^n - fG_0$; 2) if $y \in R^n - fG_0$ and $f^{-1}y$ contains no zero of $J(x)$, then $\gamma(f, y) = \sum_{x \in f^{-1}y} \text{sign } J(x)$. Hereafter, suppose that f is continuously differentiable on G . Theorem 3: if O is a component of $R^n - fG_0$ with $J(x)$ summable on $f^{-1}(O)$, then $\gamma(f, O) = (\int_{f^{-1}(O)} J(x) dx) / \text{meas } O$. Hereafter, suppose that f is continuously differentiable on an open set containing \bar{G} and that $\text{meas } G_0 = 0$. Theorem 6:

$$\int_G J(x) dx = \sum \gamma(f, O_k) \cdot \text{meas } O_k,$$

where the summation is over all components of $R^n - fG_0$. Theorem 7: if $\int_G J(x) dx \neq 0$, then fG_0 separates R^n . Theorem 9: If $\phi(y)$ is a real-valued summable function on fG_0 , then $\int_G \phi(f(x)) J(x) dx = \sum \gamma(f, O_k) \cdot \int_{O_k} \phi(y) dy$, where the summation is over all components of $R^n - fG_0$. E. E. Floyd.

RODNJANSKIY A.M.

SUBJECT USSR/MATHEMATICS/Topology CARD 1/1 PG - 54
 AUTHOR RODNJANSKIY A.M.
 TITLE On continuously differentiable mappings of open sets.
 PERIODICAL Mat. Sbornik, n. Ser. 36, 233-262 (1955)
 reviewed 6/1956

The author considers topological, metric and metric-topological properties of continuously differentiable mappings of an open set G of the R^n into the space R^n . All theorems have already been announced by the author (Doklady Akad. Nauk 72, 15-17 (1950) and Doklady Akad. Nauk 91, 1019-1021 (1953)). In the present paper the proofs for these theorems are given. The fundamental idea of this paper consists in the transfer of the argument principle of the theory of analytic functions of complex variables to the n -dimensional real analysis. By connection of the combinatoric topology and the Lebesgue's measure theory the author gives proofs for non-trivial theorems of the real analysis. The continuous differentiability of the mapping f is assumed everywhere although - according to the author - most of the results are valid for differentiable f , some even for arbitrary continuous f .

INSTITUTION: Moscow

RODNYANSKIY, A. M.

✓ Rodnyanskiy, A. M. Differentiable mappings and the order of connectivity. Mat. Sb. N.S. 37(79) (1955), 69-82. (Russian)

115
The author denotes by R^n Euclidean n -space, by S^n its one-point compactification, by O and G open subsets of R^n , by Φ a (bi-)compact subset of G , by A an F_σ subset of G , and by f a differentiable mapping of G into R^n such that its Jacobian J does not take both signs and J is not identically zero in any interval. [To avoid appealing to unpublished results the author adds the hypothesis: (I) The partial derivatives of f are continuous.] The following theorems are established: (1) If $\text{Int } (A) = \emptyset$, then $\text{Int } (fA) = \emptyset$. (2) Each of the hypotheses (a) $G - \Phi$ has a bounded component whose closure is in G , (b) G is simply-connected and separated by Φ , (c) the number of components of $R^n - \Phi$ exceeds that of the components of $S^n - G$,

1/2
(OVER)

RODNYANSKI, R. M.

implies that $f\Phi$ separates R^n . Moreover, if $R^n - \Phi$ has an infinity of components then so has $R^n - f\Phi$. (3) If O is simply-connected and $f^{-1}O \neq \emptyset$, then $S^n - f^{-1}O$ has not fewer components than $S^n - G$. (4) If G is supposed a bounded simply-connected domain with frontier G_∂ and f has a continuous extension, denoted by the same letter, to $G + G_\partial$, then f^{-1}/G_∂ is a continuum and each component of the sets $R^n - f^{-1}/G_\partial$ and $G - f^{-1}/G_\partial$ is simply connected. Moreover, in the case $n=2$, if O is a component of $G - f^{-1}/G_\partial$ in which $J \neq 0$, then f restricted to O is a topological mapping onto a component of $R^n - f^{-1}/G_\partial$ and so has a differentiable inverse [with continuous partial derivatives if f is subject to (1)] whose Jacobian does not vanish and has the sign of J . L. C. Young (Madison, Wis.).

2/2

Rodnyanski

RODNYANSKIY, A.M., kandidat fiziko-matematicheskikh nauk.

Differentiable mappings. Trudy MII no.61:58-67 '56.

(MIRA 10:1)

(Aggregates)

Rodnyanskiy, A.M.
 AUTHOR: Rodnyanskiy, A.M. (Moscow)

39-2-2/6

TITLE: On Continuous and Differentiable Mapping of Open Sets
 of an Euclidean Space. (O nepreryvnykh i differentsiruyemykh otobrazheniyakh otkrytykh mnozhestv evklidova prostranstva)

PERIODICAL: Matematicheskiy Sbornik, 1957, vol.42(84), No.2,
 pp. 179 - 196 (USSR)

ABSTRACT: A continuous mapping f of an open set G of an n -dimensional Euclidean space R^n into the same space is studied. As far as is known to the author, only the following theorems on this topic have been proved: the classical Brewer theorem on the openness of a topological mapping of G into R^n ; the theorem of K. Borsuk [Ref. 8] that if $G \subset R^n$ and the inverse images of all points are uniformly bounded in modulus, then the image fG is a domain having an $(n-1)$ -dimensional Betti number equal to zero, and the theorem of K.A. Sitnikov [Ref. 1] that if O is any fixed point not belonging to the boundary G_g of a set G in the space R^n such that:

$$\frac{\delta f^{-1}f(x)}{l(x, O)} \rightarrow 0 \text{ for } x \in G, \quad x \rightarrow G_g$$

Card 1/4

39-2-2/6

On Continuous and Differentiable Mapping of Open Sets of an Euclidean Space.

then the image fG is an open set in R^n , homologically equivalent to the set G . The author discusses a certain class of continuous mappings with restrictions which differ from those imposed by Borsuk and Sitnikov. The study of this class of mappings is not without interest, in particular, because the internal mappings investigated for the case $n = 2$ by S. Stoilow (Refs. 9 and 10) are a particular case of the mappings herein investigated and also because the methods developed in the study of this class make it possible to remove the requirements of continuity of partial derivatives in certain classical theorems of analysis. The mappings studied are: 1) isolated mappings i.e. such that the inverse image $f^{-1}y$ of each point $y \in R^n$ is an isolated set; and 2) regular mappings i.e. isolated mappings such that the local degree $\gamma(x) \neq 0$ for all $x \in G$. Theorem (1) discusses the behaviour of the mappings in the neighbourhood of a regular point a , i.e. such a point that the inverse image $f^{-1}f(a)$ is an isolated set and a local degree $\gamma(a) \neq 0$. From this theorem, it follows that any (not necessarily isolated) mapping f is

Card2/4 open at each of its regular points. It also follows from

39-2-2/6

On Continuous and Differentiable Mapping of Open Sets of an Euclidean Space.

theorem (1) that the continuous mapping f is open at the point a if it is differentiable at a and its Jacobian does not vanish at a . Following theorem (1), the concept of a point of mutual, single valuedness of a mapping of a set $E \subseteq G$ (with respect to a mapping f), i.e. a point $a \in E$ such that there is a neighbourhood $U = U(a)$ for which no point of $U \cap E$ coalesces (under the mapping f) with a regular point lying in $U \cap R$. Theorem (2) asserts that if E is a sub-set of a set of regular points of the mapping f such that each of its limit points belonging to G is an isolated point of the mapping f , then the set of points of mutual, single valuedness of the set E is open and everywhere dense in E . Theorem (3) asserts that regular mapping is open and this theorem contains, as a special case, the classical Brewer theorem on the openness of a locally topological mapping. L.D. Kudryavtsev [Ref.11] has generalised theorem (3), asserting that if f is an isolated mapping, the degree of which can be zero only at isolated points, then f is an open mapping of G into R^n . Theorem (4), previously announced by the author in Ref. [4], states that the Jacobian of a differentiable mapping of a domain G cannot change sign in G without vanishing inside G . Theorem (5) gives a sufficient

Card3/4

39-2-2/6

On Continuous and Differentiable Mapping of Open Sets of an Euclidean Space.

criterion that a mapping is locally topological. From theorems (4) and (5) follows theorem (6), which states that a differentiable mapping with a Jacobian which nowhere vanishes is locally topological. Theorem (6) was also announced in Ref.[4]. Kudryavtsev [Ref. 6], using theorem (6), obtained a theorem on implicit functions in which the continuity of the partial derivatives of the mapping functions is not required. G is a non-empty open set oriented in R^n ($n \geq 2$); a is a point of G ; f is a continuous mapping of G into R^n .

There are 11 references, of which 8 are Slavic.

SUBMITTED: April 8, 1955.

AVAILABLE: Library of Congress

Card 4/4

RODNYANSKIY, A.M.

20-4-7/60

AUTHOR: Rodnyanskiy, A.M.

TITLE: On the Mapping of the Product of Topological Spaces by Euclidean Spaces onto an Euclidean Space (Ob otobrazheniyakh proizvedeniya topologicheskogo prostranstva na yevklidovo v yevklidovo prostranstvo)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 115, Nr 4, pp. 659-662 (USSR)

ABSTRACT: At first the rather numerous terms used in this paper are explained and definitions are given. Then 9 theorems with fairly many corollaries are given. All results described in this paper are, according to the author, essentially new even for the case $X = \mathbb{R}^p$ when $p > 0$. In this connection X is the topological space and \mathbb{R}^p is a p -dimensional orientated Euclidean space. p signifies here the number of dimensions. Some of the theorems given here are also essentially new for the case $X = \mathbb{R}^p$. There are 6 Slavic references.

Card 1/2

20-4-7/60

On the Mapping of the Product of Topological Spaces by Euclidean Spaces onto
an Euclidean Space

ASSOCIATION: Moscow Physico-Technical Institute
(Moskovskiy fiziko-tekhnicheskii institut)

PRESENTED: February 28, 1957, by P.S. Aleksandrov, Academician

SUBMITTED: February 27, 1957

AVAILABLE: Library of Congress

Card 2/2

RODNYANSKIY, A.M.

20-4-9/51

AUTHOR: RODNYANSKIY, A.M.

TITLE: On Completely Continuous Vector Fields in the Banach Space
(O vpolne nepreryvnykh vektornykh pol'yakh v banakhovom prostranstve)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 116, Nr. 4, pp. 556-559 (USSR)

ABSTRACT: Let R be a real Banach space, $E \subseteq R$. Let e be an identical mapping of R onto itself. Let X be a logical linearly connected topological space, Z the topological product of X and R ; $G \subseteq Z$. The author considers mappings f of E in R for which $e \circ f$ is a completely continuous mapping of E in R (completely continuous vector fields) and continuous mappings of G in R such that to every $(x_0, y_0) \in G$ there exists a neighborhood $O^Z = O^Z(x_0, y_0)$ such that φO^Z is

relatively compact in R . Altogether in 12 theorems the author gives 29 assertions without proof. The assertions partially are generalizations or improvements (weaker assumptions) of results published by the author and Kudryavtsev L.D. during the last years [Ref. 1-10].

Card 1/2

20-4-9/51

On Completely Continuous Vector Fields in the Banach Space.

APPROVED FOR RELEASE: Tuesday, August 01, 2000

CIA-RDP86-00513R001445

ASSOCIATION: Moscow Physical-Technical Institute (Moskovskiy fiziko-tekhnicheskiy institut)

PRESENTED BY: P.S. Aleksandrov, Academician, April 4, 1957

SUBMITTED: March 10, 1957

AVAILABLE: Library of Congress

Card 2/2

AUTHOR: Rodnyanskiy, A.M. (Moscow) SOV/39-46-1-2/6

TITLE: On the Mappings of the Product of a Topological and of an Euclidean Space Onto an Euclidean Space (Ob otobrazheniyakh proizvedeniya topologicheskogo prostranstva na evklidovo v evklidovo prostranstvo)

PERIODICAL: Matematicheskiy sbornik, 1958, Vol 46, Nr 1, pp27-60 (USSR)

ABSTRACT: The theory of differentiable mappings already treated for several times by the author and Kudryavtsev [Ref 5-22] is developed. The main results of the present paper were already announced by the author [Ref 23] one year ago. In the present paper all nontrivial proofs are explicitly given. The essential assumptions of the author are as follows:

Let R_{xy}^{p+q} be an Euclidean space with the coordinates $x_1, \dots, x_p, y_1, \dots, y_q$. The mapping $f(x, y)$ is assumed to be differentiable only with respect to y for arbitrary x and to be continuous in x and y . The set G in which f is defined and continuous, is assumed to be an open subset of the topological product $Z = [X, R_y^q]$, where X is an arbitrary topological space

Card 1/3

On the Mappings of the Product of a Topological and
of an Euclidean Space Onto an Euclidean Space

30V/39-46-1-2/6

(which in many cases need not be a T_0 -space and does not have to satisfy the first axiom of countability). Under these assumptions a great series of properties of the considered mappings is obtained by the investigation of the projections and intersections of the inverse images of the points and sets and by the consideration of the degree of mapping. The paper is written very compendiously, consists of 13 paragraphs and gives, ordered by numbers, 159 properties; among them there are 10 theorems.

§ 1. Main notation and definitions (21 points). § 2. Simplest properties of the projections and intersections (62 points). § 3. Mappings of partially ordered sets (10 points). § 4. Projections and intersections of sets which are bounded in y (4 points). § 5. Sets which are locally bounded in y (8 points). § 6. On the theory of mappings of " q " into " q " (3 points). § 7. Continuous mappings of open sets locally bounded in y . Simplest properties (9 points). § 8. The degree of a continuous mapping of an open set locally bounded in y into the Euclidean space (8 points). § 9. Theorem on the inverse images (1 point). § 10. Mappings which are differentiable with respect to y . Regular points of continuous mappings (12 points). § 11. The behavior of a continuous mapping near a regular point (21 points).

Card 2/3

On the Mappings of the Product of a Topological and
of an Euclidean Space Onto an Euclidean Space

SOV/39-46-1-2/6

§ 12. The behavior of a mapping differentiable with respect
to y near a regular point (17 points), § 13. The Darboux proper-
ty of the jacobian. Implicit functions. Multiplicity of the
mapping (7 points).
There are 23 references, 21 of which are Soviet, 1 American,
and 1 German.

SUBMITTED: February 13, 1957

Card 3/3

1ST AND 2ND COLUMNS																										3RD AND 4TH COLUMNS																									
PROCESSES AND PROPERTIES INDEX																										COMMON VARIABLES INDEX																									
<p>The effect of pancreas extracts containing lipocaine on cholesterolemia and cholesterol of the liver and spleen in experimental anemia of rabbits. B. B. Rodnyanskii. <i>Problemy Endokrinol.</i> (U. S. S. R.) 5, No. 4, 5, 6 (1959).</p> <p>Pancreas exts. contg. lipocaine, without affecting glucemia, retard the development of fat infiltration of the liver of rats kept on a hunger diet and of P-poisoned rats; they also increase ketonemia and decrease lipemia in rabbits. Administration of pancreas prepn. in doses equiv. to 5 g. of the gland per kg. of wt. decreased the blood cholesterol content in most rabbits (on the av. by 8 mg.) after 3 hrs., as compared with spontaneous cholesterol variations for the same time. The liver prepn. administered in the same doses had almost no effect on blood cholesterol. Pancreas prepn. in rabbits with phenylhydrazine hypercholesterolemia retarded the decrease of blood cholesterol. The same effect was produced by the liver prepn. Subcutaneous administration of the pancreas prepn. equiv. to 1 g. of the fresh tissue to rabbits poisoned with phenylhydrazine increased the cholesterol content at the end of the poisoning period; in doses equiv. to 5 g. of fresh tissue it retarded the development of hypercholesterolemia. Administration per os of the pancreas prepn. in amts. equiv. to 20 g. of fresh tissue also retarded the development of hypercholesterolemia, but to a slightly smaller extent than did subcutaneous administration in amts. equiv. to 5 g. of fresh tissue. Subcutaneous administration decreases cholesterol in the spleen. Ten references.</p> <p style="text-align: right;">W. R. Henn</p>																																																			
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																																																			

11 H

Effect of lipocai extracts on cholesterol metabolism of the liver of dogs with induced pancreatic diabetes. B. H. Rodnyanskii (Ukrainian Centr. Inst. Endocrinol. Organ. other., Kharkov). *Byull. Eksp. Biol. Med.* 13, No. 12, 26 (1912). - Pancreatctomized dogs with a cannula inserted in the v. porta and v. hepatica received subcutaneous injections of an ext. contg. lipocai substance which caused a slight decrease in the cholesterol (C) content of peripheral blood and a marked decrease in the amt. of C released by the liver. The C content of the liver and spleen was somewhat lowered. The C content of bile did not change.

RODNYANSKIY, B.B. (Chernovitsy); MALINSKIY, D.M. (Chernovitsy)

Significance of thyroid function test with the aid of radiiodine
in the diagnosis of initial and obliterated forms of thyretoxicosis.
Probl.endok. 1 gorm. 2 no.1:8-12 Ja-F '56. (MLRA 9:10)

1. Iz kafedry fakul'tetskoy terapii (zav. prof. N.B.Shchupak)
Chernovitskogo meditsinskogo instituta (dir. M.M.Kovalev)
(**HYPERTHYROIDISM**, diagnosis,
radiiodine test (Rus))
(**IODINE**, radioactive,
diagn. of hyperthyroidism (Rus))

RODNYANSKIY, B.B., dotsent; KLOCHKOVA, L.S., kandidat meditsinskikh nauk

Studying functions of the thyroid with the aid of radioactive iodine
in patients with Botkin's disease. Vrach.delo no.11:1211-1213 N '56.
(MLRA 10:3)

1. Kafedra fakul'tetskoy terapii (zaveduyushchiy - professor N.B.
Shchupak) Chernovitskogo meditsinskogo instituta.
(HEPATITIS, INFECTIOUS) (RADIOACTIVE TRACERS)
(THYROID GLAND)

RODNYANSKIY, B.B.

Session of the White Russian Republic Goiter Dispensary. Probl.
endok. i gorm. 4 no.3:124-127 My-Je '58 (MIRA 11:8)
(GOITER)

RODNYANSKIY, B.B.

Radiometric examination of the function of the thyroid gland
in diseases of the liver and bile ducts. Med.rad. no.1:
32-36'63. (MIRA 16:10)

1. Iz kafedry fakul'tetskoy terapii (zav. - prof. N.B.Shechupak)
Chernovitskogo meditsinskogo instituta.
(RADIOMETRY) (THYROID GLAND)
(BILIARY TRACT--DISEASES)

RODNYANSKIY, I.M.; KOROBKOV, V.I.; GALINKER, I.S.

Contraction of aqueous solutions of alcohols at 237°C. Izv.vys.
ucheb.zav.; khim.i khim.tekh. 5 no.1:62-64 '62. (MIRA 15:4)

1. Khar'kovskiy sel'skokhozyaystvennyy institut imeni V.V.
Dokuchayeva, kafedra fizicheskoy khimii.
(Alcohols)

RODNYANSKIY, I.M.; KOROBKOV, V.I.; GALINKER, I.S.

Specific volumes of electrolyte solutions at high temperatures.
Zhur.fiz.khim. 36 no.10:2216-2219 O '62. (MIRA 17:4)

1. Khar'kovskiy sel'skokhozyaystvennyy institut imeni Dokuchayeva.

5(4)

AUTHORS: Rodnyanskiy, I. M., Galinker, I. S., SOV/20-126-2-28/64
Korobkov, V. I.

TITLE: The Electric Conductivity of the Aqueous Solutions of Sodium Hydroxide at High Temperatures (Elektroprovodnost' vodnykh rastvorov yedkogo natra pri vysokikh temperaturakh)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 2, pp 327-329 (USSR)

ABSTRACT: Short reference is first made to several earlier papers dealing with this subject, in which, according to the nature of the electrolyte and its concentration at various temperatures maxima of conductivity were found: For the salts of trivalent, bivalent, and univalent metals at 60°, 100-115°, and 280-300° respectively. It was of interest to investigate the further course of electric conductivity within the temperature range above 340°. However, the solution of this problem entails experimental difficulties as to the selection of the material for the electric insulation of the electrolytic cell and the hermetical sealing of the current supply lines. The chemical industry is in need of methods for the determination of electric conductivity at high temperatures

Card 1/3

The Electric Conductivity of the Aqueous Solutions
of Sodium Hydroxide at High Temperatures

SOV/20-126-2-28/64

($\sim 360^\circ$) and even for the most aggressive media, i.e. for basic lyes. The electrolytic cell used by the authors and the electrolytic conductors built into the steel stoppers of the autoclave are shown by a schematical drawing and briefly discussed. Next, the method of measuring electric conductivity is described. These measurements were carried out by means of the bridge MVL-47. A diagram shows the curves for the variation of the specific electric conductivity κ of aqueous NaOH solutions of various concentrations (1.3 and 5 %) up to 360° . All curves pass through a maximum near a temperature of $200-220^\circ$ C. With increasing concentration the maximum shifts towards lower temperatures. At 360° the specific electric conductivity is by 2.5-3 times lower than maximum electric conductivity. The maximum of the conductivity for sodium hydroxide solutions is attained at lower temperatures than in the case of NaCl. At moderate temperatures NaCl and NaOH are equally strong electrolytes, but with increasing temperature, NaOH becomes a weaker electrolyte than NaCl. This is probably due to the existence of a larger

Card 2/3

The Electric Conductivity of the Aqueous Solutions of Sodium Hydroxide at High Temperatures SOV/20-126-2-28/64

portion of covalent binding in the molecule of sodium hydroxide. An exact interpretation of the process will be possible only after a large number of experimental data will have accumulated. There are 2 figures, 1 table, and 6 references, 5 of which are Soviet.

ASSOCIATION: Khar'kovskiy sel'skokhozyaystvennyy institut im. V. V. Dokuchayeva (Khar'kov Agricultural Institute imeni V. V. Dokuchayev)

PRESENTED: March 3, 1959, by A. N. Frumkin, Academician

SUBMITTED: February 9, 1959.

Card 3/3

GALINKER, I.S.; RODNYANSKIY, I.M.; KOROBKOV, V.I.; LEKAKH, N.B.

Temperature-dependent differences in the thermodynamic properties of water and electrolyte solutions. Ukr. fiz. zhur. 9
no.4:401-405 Ap '64. (MIRA 17:8)

1. Sel'skokhozyaystvennyy institut im. V.V. Dokuchayeva,
Khar'kov.

RODNYANSKIY, I. I.

Dissertation: "Electrical Conductivity of Aqueous Solutions of Strong Electrolytes at High Temperatures." Cand Chem Sci, Khar'kov State U, Khar'kov, 1954. Referativnyy Zhurnal--Khimiya, Moscow, No 2, Apr 54.

SO: SUM 284, 26 Nov 1954

KRASNOSEL'SKIY, V.N.; RODZIANSKIY, I.M.; SHEYN, S.M.; GALINKER, I.S.

Conductometric analysis method for the control of alkali melting
of the salts of aromatic sulfo acids. Khim. prom. 41 no.5:384-
385 My '65. (MIRA 18:6)

1. Rubezhanskiy filial Nauchno-issledovatel'skogo instituta
organicheskikh poluproduktov i krasiteley.

KOROBKOV, V.I.; RODNYANSKIY, I.M.

Compressibility of saturated monoatomic alcohols and their aqueous
solutions at 237°C. Izv.vys.ucheb.zav.; khim. i khim.tekh. 8
no.2:214-217 '65. (MIRA 18:8)

1. Khar'kovskiy sel'skokhozyaystvennyy institut imeni Dokuchayeva,
kafedra obshchey khimii.

RODNYANSKIY, I.M.

✓ 2620

ELECTROCONDUCTIVITY OF CONCENTRATED
AQUEOUS SOLUTIONS OF LiCl, NaCl, AND KCl AT
HIGH TEMPERATURES. I. M. Rodnyanski and I. B.

Galliker. (Khar'kov V. V. Dokuchaev Agri. Inst.)
Doklady Akad. Nauk 105, 115-118 (1955) Nov. 1. (in Russian) ①

Investigations of electroconductivity of 1 to 3N salt
solutions of LiCl, NaCl, and KCl up to 340°C are
discussed, and tabulations are given. (R.V.J.)

MA
WST

17(

SOV/177-58-9-3/51

AUTHORS: Kuz'minov, V.K., and Borshtenbinder, V.M., Colonels
of the Medical Corps, Rodnyanskiy, L.L., Lieutenant-
Colonel of the Medical Corps

TITLE: The Prophylaxis of Traumatism in Garrison

PERIODICAL: Voenno-meditsinskiy zhurnal, 1958, Nr 9, pp 10-13
(USSR)

ABSTRACT: The present article contains some basic problems of
implementing prophylactic measures against injuries
in military units. The Decree of the Plenum of the
Central Committee of the CPSU of 17 December 1957
"On the Work of the Trade Unions of the USSR" says
that the elimination of traumatism is to be considered
a State task. This task is to be carried out by the
command of the units, by the Medical Corps and by
hospitals. The prophylactic work is to be headed by
the surgical section of the garrison hospital under
the control of a medical officer. According to stati-
stical data, most injuries occur off-duty

Card 1/2

The Prophylaxis of Traumatism in Garrison

SOV/177-58-9-3/51

(table 1). A sample questionnaire (table 2) is proposed to cover the principal reasons of traumatism, such as fatigue, insufficient supervision, faulty equipment, lack of safety provision, personal failure, and mere accidents. The kind of injury, its location and medical progress must be recorded and evaluated. A determination of the most frequently recurring single instances that lead to injuries is regarded as especially important. Elimination of these cases would considerably reduce the overall number of traumatisms. There are 2 tables.

Card 2/2

RODNYANSKIY, L.L., kand. med. nauk (Dnepropetrovsk, ul. Kirova. d.30-a.kv.3)

Nonindustrial traumatism and the role of medical personnel in
its prevention. Ortop. travm. i protez. 24 no.6:39-42 Ju '63
(MIRA 16:12)

KUZ'MINOV, V.K., polkovnik med.sluzhby; BORSHTENBINDER, V.M., polkovnik med.
sluzhby; RODNYANSKIY, I.I., podpolkovnik med.sluzhby

Prevention of accidents in an army garrison. Voen.-med.zhur. no.9:
10-13 S '58. (MIRA 12:12)

(ACCIDENTS, prev. & control
in soldiers (Rus))
(ARMED FORCES PERSONNEL, dis.
accid. in soldiers, prev. (Rus))

RODNYANSKIY, L.L.

BORSHTENBINDER, V.M., kand.med.nauk; ~~RODNYANSKIY, L.L. (Ryazan')~~

Closed fracture of the pubic bone. Ortop.travm. i protez. 18
no.4:61 J1-Ag '57. (MIRA 11:1)
(PELVIS--FRACTURE)

RODNYANSKIY, L. L. Cand Med Sci -- (diss) "For the technique of ^{the} ⁱreposition and
retention of ~~fractions of broken bone~~ during osteosynthesis operations."

Ryazan', 1957. 17 pp (Ryazan' State Med Inst im Academician I. P. Pavlov),
230 copies (KL, 14-58, 117)

RODNYANSKIY, I.I.

New double bone holders for osteosynthesis. Ortop.travm. i protez.
13 no.3:52-54 My-Ja 1971. (KLEA 10:9)

1. Iz kafedry operativnoy khirurgii (zav. - prof. M.A.Yegorov)
i kafedry fakultetskoy khirurgii (zav. - prof. V.A.Zhurav)
Iyazanskogo meditsinskogo instituta im. akad. I.P.Pavlova (dir. -
prof. L.S.Sutulov)

(ORTHOPEDICS, appar. and instruments
double bone holders for osteosynthesis)

MISCELLANEOUS

"New Double Bone Holders for Osteosynthesis", by L.L. Rodnyanskiy, Chair of Operative Surgery (Head - Prof. M.A. Yegorov) and Chair of Faculty Surgery (Head - Prof. V.A. Zhmur) of the Ryazan' Medical Institute imeni Academician I.P. Pavlov (Director - Prof. L.S. Sutulov), Ortopediya, Travmatologiya i Protezirovaniye, No 3, May-June 1957, pp 52-54.

A new type of double bone holders with a repositor, for osteosynthesis, is described. The instrument, which was designed by the author, is described in detail and illustrated by copious photographs showing the successive procedures of surgical operation. The advantages of the new device are as follows:

1. The physical exertion of the surgeon is lessened.
2. The number of assistants may be reduced to one.
3. The duration of the operation is decreased.

Card 1/2

- 55 -

RODNYANSKIY, L.L., podpolkovnik meditsinskoy sluzhby

Holder. Voen.med.zhur. no.12:81 D '56.
(SURGICAL INSTRUMENTS AND APPARATUS)

(MLRA 10:3)

RODNYANSKIY, L.L., kand.med.nauk (Dnepropetrovsk, ul. Kirova, d.30-a, kv.3)

Methodology of fracture treatment. Ortop., travm. i protez. 25
no.1:62-64 Ja '64. (MIRA 17:9)

1.Gorodskoy travmatolog, zaveduyushchiy travmatologicheskim otdeleniyem
16-y bol'nitsy Dnepropetrovska.

RODNYANSKIY, L.L.; KOTLYARCHUK, P.Z.

Internal injuries of the knee joint following direct application
of force. Ortop., travm.i protez. 22 no.4:72 Ap '61.

(MIRA 14:11)

(KNEE--WOUNDS AND INJURIES)

RODNYANSKIY, L.M.; YEGER, S.M.

Review of "Design of airplane hydraulic devices" by T.M.Bashta. Vest.
mashinostr. 43 no.11:90 N '63. (MIRA 17:2)

L 17849-66 EWT(d)/EWP(1) IJP(c) BC

ACC NR: AP6004550

SOURCE CODE: UR/0103/66/000/001/0062/0073

AUTHOR: Kazamarov, A. A. (Moscow); Rodnyanskiy, L. O. (Moscow)

ORG: None

TITLE: The theory of two-dimensional automatic control systems with modulation

SOURCE: Avtomatika i telemekhanika, no. 1, 1966, 62-73

TOPIC TAGS: automatic control, automatic control theory

ABSTRACT: A. A. Krasovskiy (Avtomatika i telemekhanika, t. SVIII, No 2, 1957; Ibid., t. XXI, No 9, 1960) studied two-dimensional automatic control systems with identical channels and antisymmetric cross connections by means of complex transfer functions assuming that the modulation frequency greatly exceeds the eigenfrequencies of the controlled plant. However, in many cases of practical interest this assumption is not valid. The present authors discuss the same problem concerning linearized two-dimensional systems and establish in complex coordinates the equation of a closed two-dimensional system with signal modulation. The derivation takes into account the nonstationary features introduced by the demodulation process, but the equations are reduced to a steady state form. The author establishes the conditions under which the evaluation of the nonsteady

Card 1/2

UDC: 62-501

L 17849-66

ACC NR: AP6004550

state of the demodulator becomes necessary. This nonsteady state limits the value of the Q-factor of the system. Orig. art. has: 69 formulas and 6 figures.

SUB CODE: 13 / SUBM DATE: 25Dec64 / ORIG REF: 005

Card 2/2 nst

RODNYANSKIY, L.O., inzh. (Moskva)

Problem concerning the passage of an AM signal through linear
four-terminal networks. Elektrichestvo no.3:53-57 Mr '62.

(MIRA 15:2)

(Electric networks)

35373
S/105/62/000/003/002/003
E025/E484

93210 (1132, 1159, 1040)

AUTHOR: Rodnyanskiy, L.O., Engineer (Moscow)

TITLE: The passage of an amplitude modulated signal through
a linear fourpole

PERIODICAL: Elektrichestvo, no.3, 1962, 53-57

TEXT: The recent use of automatic control systems having signals with double amplitude modulation and also phase modulation make it desirable to consider the equivalent transfer functions of such systems and the conditions for which real input and output signals are connected by a linear differential equation. It is shown that a linear system with an amplitude modulated input signal remains linear for complex amplitudes of the modulated signal without imposing any restrictions on the form of the system operator; however, for a real input signal it is necessary to restrict the form of the system operator to those having only real coefficients, otherwise the output signal becomes a complex function of time. The conditions are considered under which linear systems remain linear for real amplitudes of the modulated signal (envelope). It is shown that a necessary condition is

Card 1/2

RODNYANSKIY, M.I., podpolkovnik meditsinskoy sluzhby; MARKARYAN, Ye.A., pod-
polkovnik meditsinskoy sluzhby

Mass examinations of new recruits for worms and treatment of carriers.
Voen.-med.zhur. no.9:81-82 S '59. (MIRA 13:1)
(RUSSIA--ARMY--MEDICAL EXAMINATIONS)
(WORMS, INTESTINAL AND PARASITIC)

KOIDNYANSKIY, M. I.

M. I. Koidnyanskiy, Lieutenant Colonel of the Medical Service and the 1st Department, Lieutenant Colonel of the Medical Service -- Experience in Large-Scale Examination of Young Recruits for Helminthic Infestation and in the Treatment of Carriers.

Every year, at the time of arrival of new recruits into this unit, a general examination of the new recruits is made for helminthic infestation, along with the detection and examination of the acute gastro-intestinal diseases suffered, with subsequent treatment of carriers detected. The organization of this work is divided into three periods.

The first, preparatory, period includes the construction of a graph of the sequence of collecting and delivering the material from the unit to the sanitary epidemiological laboratory, the giving of the material to new recruits concerning helminthic infestations, the preparation of the requisite number of flasks in the sanitary epidemiological laboratory for collecting the material; in the second period, the tasks are distributed, then collected and delivered to the laboratory. During the third period treatment of carriers is performed with subsequent control laboratory checking of the effectiveness of the therapy.

Penicillin bottles were used for collecting the material.

Voenno-Meditsinskii Zhurnal, No 5, 1959.

In the sanitary epidemiological laboratory they were carefully washed out, small white petioles were inserted through the rubber caps, and in this form they were inserted through medical posts of the units. Before issuing them to the personnel, adhesive strips with the list of names of the sub-jections were attached to the bottles. The names of the sub-jections and the squad commanders issued the bottles after medical post of the unit for examination. On the same day, the bottles were delivered to the sanitary epidemiological laboratory in a special box. Every day, 150-200 persons were examined for helminthic carriage.

After the examination of the entire personnel a list of the carriers was made. According to graphs approved by the unit commander, the patients were sent in groups of 10-12 to the medical post, where they were subjected to oxygen treatment according to the generally accepted method.

A second laboratory examination, no sooner than two weeks after the treatment, for the presence of helminth ova was used as the main method for checking on the effectiveness of the treatment. The entire work in controlling helminthic infestation was planned so that it should be concluded at the beginning of the spring period.

Voenno-Meditsinskii Zhurnal, No 2, 1959.

RODNYANYI, M.

Device for adjusting safety valves. Tekh. sov.kolkh., RTS, sovkhos.
20 no.23:9-13 D '59. (MIRA 13:3)
(Safety appliances)

KULIK, Nikolay Alekseyevich [Kulyk, M.O.]; MEL'NIKOV, Dmitriy Ivanovich;
RODNYANYI, Mikhail Ivanovich [Rodnianskiy, M.I.]; SUSHKO, I.S., red.;
YEROSHENKO, T.G. [Yeroshenko, T.H.], tekhn. red.

[Laboratory and practical work with tractors and motor vehicles]
Laboratorno-praktychni zaniattia z traktoriv i avtomobiliv. Kyiv,
Derzhsil'hospvydav URSR, 1961. 234 p. (MIRA 15:7)
(Tractors) (Motor vehicles)

RODONYI, Karoly

Transportation tasks of the Hungarian State Railways in 1964.
Kozleked kozl 20 no. 12:181-183 22 Mr '64.

Károly

CSANADI, György, dr., egyetemi tanár; FASKERTI, Sándor; SZABO, Dezső, dr.,
a közlekedéstudományok kandidátusa, okl. mérnök; CSUHAY, Dénes;
TAKÁCS, Endre; CSABAI, Rudolf; NAGY, Rudolf; KUTAS, László, mérnök;
VASARHELYI, Boldizsár, dr., a műszaki tudományok doktora, tanszék-
vezető egyetemi tanár; KOLLER, Sándor, megyei adjunktus; KALNOKI
KISS, Sándor; GYOMBER, Sándor; TALLO, Gyula; KOZÁRY, István; SZILAGYI,
Lajos; HEGYI, Kálmán, okl. mérnök; BERCZIK, András; MARKI, László; PALFI,
BUDINSZKI, Endre; NAGY, Endre, okl. mérnök; SZATMÁRY, Ferenc; MAGORI,
Judit; CSIKHELYI, Béla; MESZLERI, Zoltán; VEROSZTA, Imre; ZSICA, Sándor;
TOROK, István; KONCZ, László; WESSELY, Ferencné; SZABO, Béla; KOMOROCZI,
Lajos; GINTL, József; CSONTOS, Dezső; JAKAB, Sándor; LOVASZ, István,
mérnök; KISS, Károly; ~~BODGÁZ, Károly~~

The City Transportation Conference in Szeged. Közl. tud. sz. 12. no. 2:
49-54 F. '62.

1. Akadémiai levelező tag, a közlekedés- és postaügyi miniszter
első helyettese, és "Közlekedéstudományi Szemle" szerkesztő
bizottsági tagja (for Csanadi) 2. Közlekedés- és Postaügyi Minisztérium
Műszaki Felügyeleti Osztályának vezetője (for Faskerti) 3. Fővárosi
Tanács Végrehajtó Bizottsága VIII. Városrendezési és Építészeti
Osztályának munkatársa, és "Közlekedéstudományi Szemle" szerkesztő
bizottsági tagja (for Szabo)

(Continued on next card)

CSABAI, Gyorgy --- (Continued) Card 2.

4. Fomernok, Kozlekedes- es Postaugyi Miniszterium Kozlekedespoli-
tikai Osztalyanak munkatarsa (for Csuhay) 5. Kozlekedes- es Postaugyi
Miniszterium Autokozlekedesi Vezirigazgatóságának szakosztalyvezetoje
(for Takacs) 6. MAV fointezo, a Kozlekedestudományi Egyesulet miskolci
területi szervezetének titkara (for Csabai) 7. Fomernok, a Fovarosi
Tanacs Vegrehajto Bizottsaga Kozlekedesi Igazgatósága helyettes
vezetoje (for Nagy) 8. Fovarosi Tanacs Vegrehajto Bizottsaga
Kozlekedesi Igazgatóságaának fejlesztési eloadoja (for Kutas)
9. "Kozlekedestudományi Szemle" szerkeszto bizottsagi tagja (for
Vasarhelyi) 10. Csoportvezeto fomernok, Debrecen m.j. Varosi Tanacs
Vegrehajto Bizottsaga Ipari es Kozlekedesi Osztaly (for Kalnoki Kise)
11. Rendorornagy, Csongrad Megyei Rendorfokapitanysag Kozrendvedelmi
Osztalya (for Gyomber) 12. Fomernok, Miskolc m.j. Varosi Tanacs
Vegrehajto Bizottsaga Epitesi es Kozlekedesi Osztaly (for Tallo)
13. Fomernok, Kozlekedes-es Postaugyi Miniszterium Utosztalya (for
Kozary) 14. Fovarosi Tanacs Vegrehajto Bizottsaga VIII. Varosrendezesi
es Epiteszeti Osztalyanak vezetoje (for Szilagyi) 15. Ut-Vasutervezo Vállalat
Kozlekedesi Osztalya vezetoje (for Hegyi) 16. BUVATI Kozlekedesi es
Kozmushozszoztalyanak vezetoje, Budapest (for Berczik) 17. Pecs m.j.
varos Tanácsa BV Epitesi es Kozlekedesi Osztalyanak vezetoje (for
Marki)

(Continued on next card)

CSANADI, Gyorgy ---- (Continued) Card 3.

18. Szeged m.j. Varosi Tanacs Epitesi es Kozlekedesi Osztalyanak
fomernoke (for Falfi Budinszki) 19. Budapest Fovarosi Tanacs Melyepitesi
Tervezo Vallalat irányito tervezoje (for Endre Nagy) 20. Debreceni
Kozlekedesi Vallalat igazgatoja (for Szatmary) 21. Budapest Fovarosi
Tanacs Melyepitesi Tervezo Vallalat tervezomernoke (for Magori)
22. Budapest Fovarosi Tanacs Melyepitesi Tervezo Vallalat tervezomernoke
(for Csikhelvi) 23. Miskolci Kozlekedesi Vallalat fomernoke (for Meszleri)
24. Kozlekedes- es Postaugyi Miniszterium Autokozlekedesi Foosztalyanak
fomernoke (for Veroszta) 25. Szegedi Kozlekedesi Vallalat fomernoke
(for Zsiga) 26. Miskolci Kozlekedesi Vallalat fokonyveloje (for Torok)
27. Debreceni Kozlekedesi Vallalat fomernoke (for Koncz) 28. Penzugy-
miniszterium foeladoja (for Wessely) 29. Pecs Kozlekedesi Vallalat
igazgatoja (for Szabo) 30. Epitesugyi Miniszterium Varosrendezesi
Foosztalyanak mernoke (for Komoroczi) 31. Fovarosi Villamosvasut
Fomernoke (for Gintl)

(Continued on next card)

CSANADI Gyorgy --- (Continued) Card 4.

32. 51-es Autokozlekedesi Vallalat munkatarsa (for Csontos).
33. Ut-Vasutervezo Vallalat irodavezeto fomernoke (for Jakab).
34. Budapesti Helyierdeku Vasutak osztalyvezetoje (for Lovasz).
35. Magyar Allamvasutak igazgathelyettese (for Kiss, Karoly).
36. Magyar Allamvasutak vezeregazgathelyettese (for Rodonyi).

RODNYI, M. I.; KHERSONSKAYA, L.M.

Use of hydroclones for the separation of highly dispersed powders.
Titan i ego splavy no.4:158-164 '60. (MIRA 13:11)
(Powder metallurgy separators (Machines))

SOV/136-59-6-10/24

AUTHORS: Suchkov, A.B., Borok, B.A., Yermakova, T.N.,
Rodnyy, M.I. and Boldina, L.D.

TITLE: On the Production of Titanium by Electrolysis of Molten
Salts, Using Soluble Anodes (Nekotoryye voprosy
polucheniya titana elektrolizom rasplavlennykh
sred s ispol'zovaniyem rastvorimyykh anodov)

PERIODICAL: Tsvetnyye metally, 1959, Nr 6, pp 57-62 (USSR)

ABSTRACT: Any titanium compound possessing electronic
conductivity can be used as soluble anode. The
authors used titanium nitrides and carbides and
hydrogen-containing, oxygenous and inter-metallic
compounds of titanium, as well as titanium-base alloys
for their experiments. These were carried out in a large
laboratory plant with a maximum current supply of 1000 A.
The electrolysis cell is shown diagrammatically in the
figure, p 57 (1 - bath; 2 - lid; 3 - cell; 4 - anode lead;
5 - cathode lead; 6 - syphon). The entire apparatus was
made of stainless steel. Compact anodes, made by
powder metallurgical methods were used. These were
fixed into position and connected up and a mixture of
dry NaCl and KCl (1:1) was charged into the bath.

Card 1/4

SOV/136-59-6-10/24

On the Production of Titanium by Electrolysis of Molten Salts
By Using Soluble Anodes

Any residual moisture and occluded gases were removed by melting. A second (electrolytic) purification was carried out, in the course of which the electrolyte was saturated with titanium by means of an auxiliary cathode, and then electrolysis with a working cathode was carried out. All operations were carried out in a stream of dry, purified argon. All the experiments were performed at a temperature of 760°C and in each case the quantity of electricity was the same (1500 A hours). The following were analyzed: the cathode powder obtained on working with the auxiliary cathode; three layers of the cathode deposit (internal, middle and outer); three layers of anode slime; the electrolyte and the removed products. The results of experiments with Ti-Fe, Ti-Al, Ti-Si and Ti-Nb alloys are shown in Table 1. At present the authors are engaged on the study of binary alloys of Ti and Ni, Ca and similar metals, and Mn. Preliminary experiments have shown that the behaviour of Ni is

Card 2/4

SOV/136-59-6-10/24

On the Production of Titanium by Electrolysis of Molten Salts
by Using Soluble Anodes

analogous to that of Fe; Ca and like metals dissolve off the anode preferentially to titanium but are not deposited at the cathode. If Mn is present in the anode, the latter is soluble only if its oxygen content is extremely small. Dean's findings regarding the sharp drop in the solubility of titanium in the presence of oxygen have been confirmed. The results obtained for anode material containing 0.3% O₂ are shown in Table 2. Preliminary experiments with multi-constituent alloys have led to the conclusion that most metals change the anodic solution process of titanium, as known for binary alloys, very little. This should enable electrolytic refining of preliminarily reduced titanium raw materials (slag and concentrates) to be used as a general method for producing titanium. In order to verify this assumption, the authors carried out a series of experiments using calcium hydride as reducing agent. The experiments were carried out in an apparatus consisting of a cylinder containing argon, and a container and lid made from stainless steel. The sinter

Card 3/4

SOV/136-59-6-10/24

On the Production of Titanium by Electrolysis of Molten Salts
by Using Soluble Anodes

obtained as the result of reduction was rapidly broken up and treated in a mixer, first with water, then with 1% HCl solution until the CaO had fully dissolved. The pulp was filtered off and the powder washed with water and alcohol, and after drying was studied chemically and metallographically. In the experiments the basic following parameters were varied: temperature, proportion of reagents, duration and fineness of mixture. It was found that reduction proceeds satisfactorily when the mixture is ground to a fineness of 0.147 mm or less. The optimum processing conditions are (a) for slag - 1100°C, 2 hours, 1.8 - 2.0 kg CaH₂/kg Ti; (b) for concentrates - 1200°C, 2 hours, 2.2 - 2.4 kg CaH₂/kg Ti. Thereby, 85 to 95% Ti contained in the original materials is extracted as a solid solution (see Table 4). The material thus obtained was compacted into anodes and electrolytically refined. The results of such refining of slag and concentrates are identical and are shown in Table 5. There are 5 tables and 1 figure.

Card 4/4

VYAL'TSEV, A.N.; KEDROV, B.M.; KONDRAT'YEVA, N.A., aspirant;
RODNIY, N.I.; SMIRNOV, P.V., aspirant; CHERNAVSKIY,
S.Ya., aspirant; TENIKOV, A.G., red.

[Contradictions in the development of natural science]
Protivorechiia v razvitii estestvoznaniia. Moskva, Nauka,
1965. 351 p. (MIRA 18:9)

1. Akademiya nauk SSSR. Institut istorii yestestvoznaniya
i tekhniki. 2. Chlen-korrespondent AN SSSR (for Kedrov).

RODNYI, N.I., kandidat nauk

An international symposium devoted to general problems of the
history of science and technology. Vest. AN SSSR 34 no. 2:
112-113 F '64. (MIRA 17:5)

RODNYI, N.I., Cand Tech Sci -- (diss) "Coal varieties of the
Pechora Basin (Khal'meryuskiy, Vorkutskiy, and Inta-Kozhinskiy
Rayons)." Vorkuta, ^{Mining} ~~Mining~~ Printing House [1959], 26 pp.
120 copies (KL, 35-59) ~~120 copies~~, 114)